

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Before the Board of Patent Appeals and Interferences

In re Patent Application of

JOHNSON

Serial No. 09/048,838

Filed: March 27, 1998

For: FAIRING ARRANGEMENTS FOR AIRCRAFT



Atty. Ref.: 540-113

Group: 3644

Examiner: J. Eldred

October 10, 2001

RECEIVED

Assistant Commissioner for Patents  
Washington, DC 20231

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**REPLY BRIEF**

This Reply Brief is responsive to the new points of argument raised in the Examiner's Answer mailed August 14, 2001 (Paper No. 20). There are five main new points of argument discussed in the Examiner's Answer and they will be treated in the order discussed.

**1. There is no support for the rejection under 35 USC §112**

While it was not clear what basis the Examiner rejected the phrase "rubber or rubber-like material" in the previous official action, i.e., whether "rubber-like" was indefinite or whether the use of the word "or" was indefinite. The Examiner apparently has now decided that both features of appellant's independent claim are indefinite. Thus, both of these will be treated in this Reply Brief.

**A. "Rubber-like Material"**

It will be clearly obvious to those of ordinary skill in the art, and especially the art of aerospace design and arrangements for sealing fairings and aileron gap seals, that a "rubber-like material" has the mechanical properties of rubber. Appellant's claimed invention does not relate to electrical components or disclose that the "rubber-like material" is being used in an electrical environment. Thus one would not be concerned about the conductivity aspect of a "rubber-like material." Similarly, appellant is not using the "rubber-like material" to bond other materials and therefore the "resin composition" aspect is of no interest.

However, the mechanical properties of flexibility, elasticity and/or toughness are features that would be clearly obvious as the significant features of a "rubber-like material" in the context of an aircraft fairing arrangement. Thus, the Examiner's contention that "rubber-like material" is somehow indefinite is simply misplaced and completely ignores the context in which it is used and the fact that those skilled in the art would clearly understand such usage.

Moreover, the fact that "rubber-like" is clearly defined in the conventional English language text (copy attached to the Appeal Brief) merely confirms that the definition is well-known to those of ordinary skill in the art. The fact that "rubber-like" may have other attributes, such as non-conductivity and/or resin combination, etc., are irrelevant to the attributes which would be readily apparent to those having only ordinary skill in the art in view of the present claim and application.

Thus, the Examiner's suggestion that "rubber-like material" is not definite is simply unsupported by the Examiner's argument and is contrary to both the dictionary definition of the term and the use of the term in the specification, which definition would be clearly obvious to those of ordinary skill in the art.

### **B. Use of the Alternative "Or"**

The Examiner also now indicates that the phrase "rubber or rubber-like material" is indefinite because it is "alternative." The Examiner has supplied no citation or other legal precedent for concluding that the use of the word "or" is improper or inappropriate or in violation of any patent statute or rule of claim drafting published by the Patent and Trademark Office. In fact, the Manual of Patent Examining Procedure (MPEP), as noted in appellant's Appeal Brief, specifically states that alternative expressions using "or" are acceptable (See MPEP Section 2173.05(b)).

The Examiner suggests that the discussion in the MPEP as to the acceptability of "or" is not applicable to this situation. The Examiner suggests that only a list of materials in which the limitation "being claimed is clear, i.e. they are all magnetic materials" is appropriate. However, the MPEP specifies in the first paragraph under heading "Alternative Limitations" at §2173.05(h), that "alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims."

As used in the present claims, the use of a "rubber or rubber-like material," especially when taken in the context of a fairing arrangement for aircraft structures,

clearly teaches the similar mechanical properties of rubber and rubber-like materials. In fact, the similarity in terms of mechanical characteristics would be clearly obvious to anyone having even ordinary skill in the aerospace industry.

The Examiner does not contend that the use of the word "rubber" by itself is indefinite and, as noted above, cannot express how or why he believes "rubber-like material" is indefinite. Appellant's intent in claiming a "rubber or rubber-like material" was clearly to include not only rubber, which is a naturally occurring material, but other synthetic and/or non-naturally occurring rubbers, i.e. a "rubber-like material." Such materials are well-known to those having ordinary skill in the aerospace art.

Accordingly, the use of the word "or" as an alternative expression is clearly permitted under the normal usage in the English language and under the Manual of Patent Examining Procedure. The Examiner has provided no rule of practice or statute which makes the use of the word "or" indefinite under 35 USC §112.

## **2. The Examiner Diverts Attention from the Claim of a "Sheet Element"**

Appellant's claim language specifies that the flexible seal member comprises "a composite sheet element of rubber or rubber-like material." This Examiner's supervisor, Michael Carone, in an Interview Summary mailed December 13, 1999, (Paper No. 13), withdrew the Examiner's previous final rejection and confirmed that the Examiner had improperly rejected applicant's claims because he did not address the "composite sheet element" recited in claim 1. Notwithstanding this withdrawal, the Examiner has again copied this basis into the appealed from rejection.

In the Examiner's Answer, the Examiner focuses only the word "composite," arguing that Williams' teaching of a plurality of steel fingers coated with PTFE and plastic or nylon fingers in two separate layers is a "composite" material. While not conceding that one of ordinary skill might construe these as being "composite" materials, the point raised in appellant's Appeal Brief (paragraph bridging pages 11 and 12) is that the teachings in Williams and Shine do not disclose a "sheet element" which, as specified by appellant's claim, "defines a surface which generally conforms to the adjacent portions of said first and second fairing portions."

At no point in the Examiner's Answer does the Examiner address the fact that appellant's claims require a "sheet element" and that the flexible seal member "defines a surface . . ." The Examiner's failure to respond to the "sheet element" issue (with the rejection previously having been withdrawn by the Examiner's supervisor), clearly raised in the Appeal Brief, is particularly telling.

### **3. No Reason or Basis for Combining References**

Appellant's Appeal Brief, between pages 13 and 15, clearly discloses the fact that at no point during any of the previous multiple rejections in this case has the Examiner set out any reason why one of ordinary skill in the art would choose to combine the references (even if as contended, such a combination did disclose a "sheet element of rubber or rubber-like material" which "defines a surface . . .").

Appellant has cited both the *In re Fine* and *In re Rouffet* cases in the Appeal Brief which demonstrate that the burden is on Examiner to show a motivation to combine references that create the case of obviousness.

Rather than disclose where or how he believes there to be a reason for combining elements from the Williams and Shine references, the Examiner merely says that it is "well established patent practice to allow the substitution of elements as being obvious replacements when the elements are performing the same function in substantially the same way." The Examiner has cited no case law, no statute, or patent rule of procedure, or even a section from the MPEP which supports this contention. The Court of Appeals for the Federal Circuit, and indeed the Supreme Court, have long recognized that the fact that individual elements of a combination claim are generally well known does not negative patentability. A new combination can still be patentable as long as there is no disclosed motivation to combine the elements in the claimed manner.

The burden is always upon the Patent Office to establish a *prima facie* case of obviousness by showing some motivation to those of ordinary skill in the art to combine elements in the claimed manner. In the present case, the Examiner has consistently failed to establish any motivation for combining elements (assuming *arguendo* that those elements, and in particular, the claimed "sheet element" is disclosed at least one of the cited references). Absent any motivation, no *prima facie* case for obviousness can be made.

Accordingly, the Examiner's unfounded suggestion that it is "well established patent practice" to pick and choose elements from various references (or out of thin air in

the case of a "sheet element") and combine them in the manner of appellant's claims is simply not a correct statement of current law on obviousness.

#### **4. The References Teach Away From the Claimed Combination of Elements**

The Examiner fails to address, and in fact appears to specifically ignore, the point that appellant makes at the bottom of page 15 of the Appeal Brief, i.e. that it is "**error to find obviousness where references diverge from and teach away from the invention at hand.**"(emphasis added). Appellant pointed out that both Williams and Shine taught away from appellant's claimed structure. They both teach away from a "sheet element" or that such a sheet element be made of a "rubber or rubber-like material" or that the sheet element "defines a surface which generally conforms to the adjacent portions of said first and second fairing portions." Because reviewing courts have considered as evidence of non-obviousness where the references teach away from the claimed invention, it is clear error for the Examiner to ignore such teachings in the present case.

#### **5. "Unexpected Results"**

The Examiner alleges that appellant has failed to provide any evidence of unexpected results, but apparently ignores the evidence provided in appellant's specification. At no point during the prosecution of this application did the Examiner suggest that the specification statements were incorrect or inaccurate. It is interesting that only at this late date when appellant can no longer submit factual declarations does the Examiner dispute the unexpected results.

While appellant's invention does not hinge on evidence of unexpected results (considering the fact that the Examiner has failed to show how or where a prior art reference teaches a "sheet element" or where there is any reason to combine the two cited references or to deny the fact that the references teach away from the claimed invention), this is still one additional indicia of non-obviousness that can be considered by the Board.

In view of the above and the paucity of information in the Examiner's Answer, it is submitted that there clearly is no support for the Examiner's rejections of appellant's claims, either under §112 or under §103, and any further rejection thereunder is respectfully traversed.

Thus, and in view of the above, the rejection of claims 1-10 and 13-17 under 35 USC §112 and over the cited prior art under 35 USC §103 is clearly in error and reversal thereof by this Honorable Board is respectfully requested.

Respectfully submitted,

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